II. RESULTS

A. Protein Content:

Results of quantitation of Cry9C and PAT proteins from transformed field corn (CBH351) are shown in Table 2 below. Cry9C was found in all samples except for the crude and refined oil samples. The protein content ranged between 66.3 and 32573 ng/g. PAT protein was found in all samples except for crude oil, refined oil gluten, and starch fractions. The protein content ranged between 33 and 82184 ng/g.

Table 2. Quantities of PAT and Cry9C in Processed Commodities of Transformed Field Corn CBH 351 from the Illinois Trial as Detected by ELISA

Process	Commodity	PAT ELISA (ng/g sample)	Cry9C ELISA (ng/g sample)
	Whole Corn	14795 ± 897*	12287 ± 680
Dry Mill	Composite Grits	11326 ± 957	9506 ± 1229
	Meal	5317 ± 201	10720 ± 745
	Flour	2160 ± 167	8408 ± 735
	Hull Material	2363 ± 130	6426 ± 285
	Solvent Extracted Germ	82184 ± 13868	32573 ± 2828
	Crude Oil	ND	ND
	Refined Oil	ND	ND
Wet Mill	Steepwater Concentrate	ND	1802 ± 170
	Hull Material	33 ± 6014	3488 ± 443
	Gluten	ND	1155 ± 45
	Starch	ND	66.3 ± 5.1
	Solvent Extracted Germ	1901 ± 14.0	8800 ± 698
	Crude Oil	ND	ND
	Refined Oil	ND	ND

* ± Standard Deviation (each data point is the average of two assays each performed on two subsamples)

ND = Not Detectable (i.e. below the LOQ for the matrix)

Both Cry9C and PAT proteins were found in the control samples grown at the Illinois site. The levels of each of the proteins was less than 10% of that found in the transgenic corn samples, but not expected for a non-transformed control. AgrEvo indicates in their submission that examination of data for growth, shipping

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and processing of the samples did not reveal an explanation for the presence of these protein in the controls. Therefore, the validation assay was carried out using a control plot grown in North Carolina [BK97B04 - transgenic glufosinate resistant field corn containing the *pat* gene (T25) and near isogenic non-transgenic, non-resistant corn plants - Appendix].

Table 3. Quantities of PAT and Cry9C proteins in Processed Commodities of Control Material from the Illinois Trial as Detected by ELISA

Process	**Commodity**	**PAT ELISA (ng/g sample)**	**Cry9C ELISA (ng/g sample)**
	Whole Corn	ND	ND
Dry Mill	Composite Grits	188 ± 15.4	231 ± 60.5
	Meal	164 ± 27.6	297 ± 11.2
	Flour	62 ± 2.69	274 ± 29.8
	Hull Material	200 ± 8.18	296 ± 24.2
	Solvent Extracted Germ	1640 ± 137	1613 ± 100
	Crude Oil	ND	ND
	Refined Oil	ND	ND
Wet Mill	Steepwater Concentrate	ND	146 ± 9.58
	Hull Material	ND	102 ± 4.69
	Gluten	ND	5.03 ± 0.67
	Starch	ND	ND
	Solvent Extracted Germ	7 ± 1.96	5.25 ± 2.51
	Crude Oil	ND	ND
	Refined Oil	ND	ND

* ± Standard Deviation (each data point is the average of two assays each performed on two subsamples)

ND = Not Detectable (i.e. below the LOQ for the matrix)

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The quantities of Cry9C and PAT proteins were expressed as a percentage of total crude protein found in the respective fractions (Table 4).

Table 4. Quantities of PAT and Cry9C Proteins in Processed Commodities of Transformed Field Corn CBH 351 Expressed as Percent of Crude Protein

Process	Commodity	Crude Protein in Matrix (%)*	PAT Protein as % Crude Protein	Cry9C Protein as % Crude Protein
	Whole Corn	8.910	0.0166	0.0138
Dry Mill	Composite Grits	7-10.3	0.0162	0.0136
	Meal	7.5-9.0	0.0071	0.0143
	Flour	5.2-7.8	0.0042	0.0161
	Hull Material	8	0.0030	0.0080
	Solvent Extracted Germ	12-25	0.0685	0.0271
	Crude Oil	0	-	-
	Refined Oil	0	-	-
Wet Mill	Steepwater Concentrate	41-62	-	-
	Hull Material	8	0.00004	0.0043
	Gluten	41-60	-	-
	Starch	0.6	-	-
	Solvent Extracted Germ	22.6	0.000084	0.0039
	Crude Oil	0	-	-
	Refined Oil	0	-	-

* Range of data from CRC, Vol II, 1982; Ensminger et al. 1990; McGregor 1994.

B. Validation Study:

When fortified at 0.9 ng/mg, PAT protein was not quantifiable in whole corn, composite grits, flour, solvent extracted germ, crude oil, refined oil, steepwater concentrate, hull material (wet mill) and starch. The mean recoveries for other matrices ranged between 75.3% to 99.3% depending on the matrix (Table 4 - Appendix). When fortified at 30 ng/ml, the mean recoveries of PAT protein were between 27 and 166% among different matrices with the exception of refined oil (wet mill).

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When fortified at 0.9 ng/ml Cry9C protein was not quantifiable in composite meal, flour, hull material, steepwater concentrate, gluten, starch, solvent extracted germ press cake, crude oil, and refined oil. The mean recoveries for other matrices range from 58.2 to 130% (Table 5. - Appendix) depending on the matrix. When fortified at 30 ng/ml, the mean recoveries of PAT protein were between 20.4 and 89.8% among the different matrices with the exception of refined oil precessed by we mill. The low recovery of PAT protein from refined oil can be attributed to the denaturation of protein caused by oil-aqueous phase mixing.

C. Total Extractable Protein:

The protein contents in non-transgenic corn grains and processed fraction are shown in Table 6 (Appendix). The total extractable protein (TEP) varied from 0 to 30.3 mg/g. PAT protein was found in composite grits, composite meal, flour, hull material (dry mill) solvent extracted germ, steepwater concentrate, hull material (wet mill), gluten and solvent extracted germ press cake .

The protein contents in line the transgenic line (CBH351) fractions are shown in Table 7 (Appendix). The total extractable protein varied from 0 to 21.5 mg/g. PAT protein was found in whole corn, composite grits, composite meal, flour, hull material (dry mill), solvent extracted germ, hull material (wet mill), and solvent extracted germ press cake. Cry9C protein was found in whole corn, composite grits, composite meal, flour, hull material (dry mill), gluten, starch and solvent extracted germ press cake.

III. DISCUSSION

The data presented in Tables 2, 3 & 4 indicate the amount of the PAT and Cry9C proteins present in the respective parts of the corn and corn products. Table 4 provides relative information regarding the amounts of each of these proteins, and their amounts as a percentage of total proteins in the representative materials. Overall, based upon the data provided, these proteins are present at a maximum percentage of 0.0685% (dry mill - solvent extract germ), representing a relative small amount of total protein.

However, these data are somewhat questionable due to the levels of proteins found in the control samples grown in Illinois. It is certainly odd that both proteins are found in many of the control samples. It is possible that these results are simply the result of contamination of the control corn samples either in the field, or during the processing phase of the study. However, based upon the data provided, it is not possible to rule out the possibility that there was expression of the Cry9C and PAT proteins in the control corn. This scenario is not likely because the proteins were not detected in the control whole corn samples. But, because of positive signals in

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the control samples, there is no definitive means to conclude that the results of the transgenic fractions are not flawed. The validation assay was carried out using samples from a control plot of Glufosinate resistant corn grown in North Carolina (1997). The data and analysis from this study appear to be adequate, however, because the control was a different line of corn, grown in a different state under different (unidentified) growth conditions, these data can also be considered questionable in their relevance to this study. In addition, because they do not address the issue of why the control samples gave positive results for the proteins in question, they do not appear to resolve the issue of the Illinois-grown controls.

Therefore, the question remains, how did the control samples in this experiment become contaminated and if they were not contaminated, was there expression of the proteins in the control plants. Although the majority of the control samples contained 2% or less of the amount of each protein, compared to the transgenic, two of the control samples contained 8.1 & 9.3% of the amount of protein compared to the transgenic. These numbers are somewhat puzzling and without a more detailed explanation, they are troubling.

As they are presented, the overall numbers do support the suggestion by AgrEvo that the Cry9C and PAT proteins represent a relatively small amount of the total proteins found in the transgenic plants. However, this is based upon the assumption that the titers of the proteins provided in this report are accurate. Because the control samples did show positive signals for each proteins, the accuracy of these numbers is questionable.

CLASSIFICATION: SUPPLEMENTAL. This submission can be upgraded to ACCEPTABLE with submission an adequate explanation for why the control samples also showed positive ELISA results for the PAT and Cry9C proteins, or supplemental data to address this issue.

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APPENDIX TO PROTEIN STABILITY

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Table 1 Critical Dates for Corn Grains and Processed Fractions

Biotech Sample ID	Matrix	Line	Processed at Texas A&M	Received at ARC	Sample ground	Samples extracted	Bradford Protein Assay	PAT & Cry9C ELISA Assay
114A	WC	Control	Jan. 06, 98	Jan. 15, 98	Jan. 19, 98	Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114B	CG (dry mill)	Control	Jan. 08, 98	Jan. 15, 98	Jan. 19, 98	Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114C	CM (dry mill)	Control	Jan. 08, 98	Jan. 15, 98		Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114D	Flour (dry mill)	Control	Jan. 08, 98	Jan. 15, 98		Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114E	HM (dry mill)	Control	Jan. 08, 98	Jan. 15, 98	Jan. 19, 98	Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114F	SEG (dry mill)	Control	Jan. 13, 98	Jan. 15, 98	Jan. 19, 98	Feb. 02, 98	Feb. 04, 98	Feb. 3, 98
114G	CO (dry mill)	Control	Jan. 13, 98	Jan. 15, 98		Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114H	RO (dry mill)	Control	Jan. 14, 98	Jan. 15, 98		Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114I	SC (wet mill)	Control	Jan. 09, 98	Jan. 15, 98		Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114J	HM (wet mill)	Control	Jan. 10, 98	Jan. 15, 98	Jan. 19, 98	Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114K	Gluten (wet mill)	Control	Jan. 09, 98	Jan. 15, 98		Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114L	Starch (wet mill)	Control	Jan. 09, 98	Jan. 15, 98		Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114M	SEGPC (wet mill)	Control	Jan. 12, 98	Jan. 15, 98	Jan. 19, 98	Feb. 02, 98	Feb. 04, 98	Feb. 3, 98
114N	CO (wet mill)	Control	Jan. 13, 98	Jan. 15, 98		Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114O	RO (wet mill)	Control	Jan. 14, 98	Jan. 15, 98		Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114P	WC	CBH 351	Jan. 06, 98	Jan. 15, 98	Jan. 19, 98	Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114Q	CG (dry mill)	CBH 351	Jan. 08, 98	Jan. 15, 98	Jan. 19, 98 Jan. 30, 98	Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114R	CM (dry mill)	CBH 351	Jan. 08, 98	Jan. 15, 98		Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114S	Flour (dry mill)	CBH 351	Jan. 08, 98	Jan. 15, 98		Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114T	HM (dry mill)	CBH 351	Jan. 08, 98	Jan. 15, 98	Jan. 19, 98	Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114U	SEG (dry mill)	CBH 351	Jan. 13, 98	Jan. 15, 98	Jan. 19, 98	Feb. 02, 98	Feb. 04, 98	Feb. 3, 98
114V	CO (dry mill)	CBH 351	Jan. 13, 98	Jan. 15, 98		Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114W	RO (dry mill)	CBH 351	Jan. 14, 98	Jan. 15, 98		Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114X	SC (wet mill)	CBH 351	Jan. 09, 98	Jan. 15, 98		Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114Y	HM (wet mill)	CBH 351	Jan. 10, 98	Jan. 15, 98	Jan. 19, 98	Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114Z	Gluten (wet mill)	CBH 351	Jan. 09, 98	Jan. 15, 98		Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114AA	Starch (wet mill)	CBH 351	Jan. 09, 98	Jan. 15, 98		Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114AB	SEGPC (wet mill)	CBH 351	Jan. 12, 98	Jan. 15, 98	Jan. 19, 98	Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114AC	CO (wet mill)	CBH 351	Jan. 13, 98	Jan. 15, 98		Feb. 02, 98	Feb. 04, 98	Feb. 2, 98
114AD	RO (wet mill)	CBH 351	Jan. 14, 98	Jan. 15, 98		Feb. 02, 98	Feb. 04, 98	Feb. 2, 98

Table 2 Critical Dates for Validation and Recovery Studies of Processed Fractions of Corn Grains from study BK97B04

Biotech Sample ID	Matrix	Line	Processed at Texas A&M	Received at ARC	Sample ground	Samples extracted	PAT ELISA Assay	Cry9C ELISA Assay
78A	WC	Control	Jan. 06, 98	Jan. 15, 98	Apr. 22, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98	Apr. 28, 98 May 4, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98
78B	CG (dry mill)	Control	Jan. 08, 98	Jan. 15, 98	Apr. 22, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98	Apr. 28, 98 May 4, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98
78C	CM (dry mill)	Control	Jan. 08, 98	Jan. 15, 98		Apr. 23, 98 Apr. 28, 98 May 4, 98	Apr. 28, 98 May 4, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98
78D	Flour (dry mill)	Control	Jan. 08, 98	Jan. 15, 98		Apr. 23, 98 Apr. 28, 98 May 4, 98	Apr. 28, 98 May 4, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98
78E	HM (dry mill)	Control	Jan. 08, 98	Jan. 15, 98	Apr. 22, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98	Apr. 28, 98 May 4, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98
78F	SEG (dry mill)	Control	Jan. 13, 98	Jan. 15, 98	Apr. 22, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98	Apr. 28, 98 May 4, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98
78G	CO (dry mill)	Control	Jan. 13, 98	Jan. 15, 98		Apr. 23, 98 Apr. 28, 98 May 4, 98	Apr. 28, 98 May 4, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98
78H	RO (dry mill)	Control	Jan. 14, 98	Jan. 15, 98		Apr. 23, 98 Apr. 28, 98 May 4, 98	Apr. 28, 98 May 4, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98
78I	SC (wet mill)	Control	Jan. 09, 98	Jan. 15, 98		Apr. 23, 98 Apr. 28, 98 May 4, 98	Apr. 28, 98 May 4, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98
78J	HM (wet mill)	Control	Jan. 10, 98	Jan. 15, 98	Apr. 22, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98	Apr. 28, 98 May 4, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98
78K	Gluten (wet mill)	Control	Jan. 09, 98	Jan. 15, 98		Apr. 23, 98 Apr. 28, 98 May 4, 98	Apr. 28, 98 May 4, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98
78L	Starch (wet mill)	Control	Jan. 09, 98	Jan. 15, 98		Apr. 23, 98 Apr. 28, 98 May 4, 98	Apr. 28, 98 May 4, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98
78M	SEGPC (wet mill)	Control	Jan. 12, 98	Jan. 15, 98		Apr. 23, 98 Apr. 28, 98 May 4, 98	Apr. 28, 98 May 4, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98
78N	CO (wet mill)	Control	Jan. 13, 98	Jan. 15, 98		Apr. 23, 98 Apr. 28, 98 May 4, 98	Apr. 28, 98 May 4, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98
78O	RO (wet mill)	Control	Jan. 14, 98	Jan. 15, 98		Apr. 23, 98 Apr. 28, 98 May 4, 98	Apr. 28, 98 May 4, 98	Apr. 23, 98 Apr. 28, 98 May 4, 98

WC: Whole corn — CO: Crude oil
CG: Composite grits — RO: Refined oil

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Table 3 Limit of Quantitation (LOQ) in PAT and Cry9C ELISAs of Control Corn Samples

Biotech Sample ID	Matrices	PAT ELISA LOQ[a] (ng/mL)	Cry9C ELISA LOQ[a] (ng/mL)
78A	Whole Corn (RAC)	2.01	0.47
78B	Composite Grits (dry mill)	2.50	0.47
78C	Composite Meal (dry mill)	0.47	0.47
78D	Flour (dry mill)	0.47	0.47
78E	Hull Material (dry mill)	0.47	0.47
78F	Solvent Extracted Germ (dry mill)	6.40	0.47
78G	Crude Oil (dry mill)	0.80	0.47
78H	Refined Oil (dry mill)	0.47	0.47
78I	Steepwater Concentrate (wet mill)	0.82	0.47
78J	Hull Material (wet mill)	0.47	0.47
78K	Gluten (wet mill)	0.47	0.47
78L	Starch (wet mill)	0.47	0.47
78M	Solvent Extracted Germ Press Cake (wet mill)	0.47	0.47
78N	Crude Oil (wet mill)	0.47	0.47
78O	Refined Oil (wet mill)	0.47	0.47

[a] The LOQ was determined as either the LOQ of the assay (lowest standard used), or by calculation from assays of matrix which did not contain PAT or Cry9C, whichever is the higher.

Table 4 Validation of Sample Extraction and PAT ELISA with Fortified Non-transgenic Controls of Corn Samples

Biotech Sample ID	Matrices	Fortified at 0.9 ng/mL Detected (ng/mL)	Fortified at 0.9 ng/mL %Recovery[a]	Fortified at 30 ng/mL Detected (ng/mL)	Fortified at 30 ng/mL % Recovery[a]
78A	Whole Corn (RAC)	ND	NA	39.8 ± 7.86	133 ± 26.2
78B	Composite Grits (dry mill)	ND	NA	37.9 ± 5.34	126 ± 17.8
78C	Composite Meal (dry mill)	0.89 ± 0.65	99.3 ± 71.9	34.1 ± 4.22	114 ± 14.1
78D	Flour (dry mill)	ND	NA	33.0 ± 7.35	110 ± 24.5
78E	Hull Material (dry mill)	0.80 ± 0.45	89.1 ± 49.6	33.8 ± 7.67	113 ± 25.6
78F	Solvent Extracted Germ (dry mill)	ND	NA	49.9 ± 7.41	166 ± 24.8
78G	Crude Oil (dry mill)	ND	NA	27.7 ± 6.07	92.5 ± 20.2
78H	Refined Oil (dry mill)	ND	NA	3.55 ± 2.27	11.8 ± 7.55
78I	Steepwater Concentrate (wet mill)	ND	NA	21.5 ± 2.74	71.5 ± 9.13
78J	Hull Material (wet mill)	ND	NA	31.8 ± 6.17	106 ± 20.6
78K	Gluten (wet mill)	0.74 ± 0.64	82.6 ± 71.0	22.2 ± 6.24	73.9 ± 20.8
78L	Starch (wet mill)	ND	NA	8.16 ± 3.31	27.2 ± 11.0
78M	Solvent Extracted Germ Press Cake (wet mill)	0.68 ± 0.33	75.3 ± 36.2	25.8 ± 6.31	85.9 ± 21.0
78N	Crude Oil (wet mill)	ND	NA	17.3 ± 4.00	57.8 ± 13.3
78O	Refined Oil (wet mill)	ND	NA	ND	NA

[a] The recovery is expressed in average of 8 assay replicates from 4 extract replicates for each PAT-fortified non-transgenic matrix.
ND (Not detectable): Below the limit of quantitation.
NA (Not applicable)

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Table 5 Validation of Sample Extraction and Cry9C ELISA with Fortified Non-transgenic Controls of Corn Samples

		Fortified at 0.9 ng/mL		Fortified at 30 ng/mL	
Biotech Sample ID	Matrices	Detected (ng/mL)	Mean ± SD % Recovery*	Detected (ng/mL)	Mean ± SD % Recovery*
78A	Whole Corn (RAC)	1.01 ± 0.47	113 ± 52.5	26.8 ± 2.45	89.3 ± 8.16
78B	Composite Grits (dry mill)	0.53 ± 0.13	58.8 ± 14.3	24.0 ± 1.73	80.0 ± 5.76
78C	Composite Meal (dry mill)	ND	NA	18.4 ± 7.51	61.3 ± 25.0
78D	Flour (dry mill)	ND	NA	21.6 ± 2.58	71.9 ± 8.61
78E	Hull Material (dry mill)	ND	NA	24.5 ± 2.40	81.7 ± 8.00
78F	Solvent Extracted Germ (dry mill)	1.17 ± 0.37	130 ± 41.3	31.8 ± 7.15	106 ± 23.8
78G	Crude Oil (dry mill)	0.52 ± 0.18	58.2 ± 19.7	24.4 ± 5.14	81.2 ± 17.1
78H	Refined Oil (dry mill)	ND	NA	8.63 ± 2.54	28.8 ± 8.48
78I	Steepwater Concentrate (wet mill)	ND	NA	23.3 ± 4.99	77.8 ± 16.6
78J	Hull Material (wet mill)	ND	NA	26.1 ± 7.68	87.1 ± 25.6
78K	Gluten (wet mill)	ND	NA	23.2 ± 3.20	77.3 ± 10.7
78L	Starch (wet mill)	ND	NA	17.6 ± 4.31	58.6 ± 14.4
78M	Solvent Extracted Germ Press Cake (wet mill)	ND	NA	26.9 ± 1.53	89.8 ± 5.11
78N	Crude Oil (wet mill)	ND	NA	23.8 ± 3.51	79.2 ± 11.7
78O	Refined Oil (wet mill)	ND	NA	6.13 ± 2.01	20.4 ± 6.71

* The recovery is expressed in average of 12 assay replicates from 6 extract replicates for each Cry9C-fortified non-transgenic matrix.
ND (Not detectable): Below the limit of quantitation.
NA (Not applicable).

Table 6 PAT, Cry9C and Total Extractable Protein Content in Non-transgenic Corn Samples

Sample ID	Matrices	mg TEP/ g sample	ng PAT/ g sample	ng Cry9C/ g sample
114A	Whole Corn (RAC)	3.33 ± 0.11	ND	ND
114B	Composite Grits (dry mill)	2.44 ± 0.19	188 ± 15	231 ± 60
114C	Composite Meal (dry mill)	1.64 ± 0.06	164 ± 28	297 ± 11
114D	Flour (dry mill)	1.72 ± 0.09	61.7 ± 2.7	274 ± 30
114E	Hull Material (dry mill)	1.17 ± 0.07	200 ± 8	296 ± 24
114F	Solvent Extracted Germ (dry mill)	30.3 ± 2.36	1640 ± 140	1610 ± 100
114G	Crude Oil (dry mill)	ND	ND	ND
114H	Refined Oil (dry mill)	ND	ND	ND
114I	Steepwater Concentrate (wet mill)	1.26 ± 0.05	ND	146 ± 10
114J	Hull Material (wet mill)	0.70 ± 0.00	ND	102 ± 5
114K	Gluten (wet mill)	ND	ND	5.03 ± 0.67
114L	Starch (wet mill)	ND	ND	ND
114M	Solvent Extracted Germ Press Cake (wet mill)	1.33 ± 0.08	7.11 ± 1.96	5.25 ± 2.51
114N	Crude Oil (wet mill)	ND	ND	ND
114O	Refined Oil (wet mill)	ND	ND	ND

TEP (Total Extractable Protein)
ND (Not detectable): Below the limit of quantitation.

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Table 7 PAT, Cry9C and Total Extractable Protein Content in Transgenic Corn Samples

Sample ID	Matrices	mg TEP/ g sample	ng PAT/ g sample	ng Cry9C/ g sample
114P	Whole Corn (RAC)	3.88 ± 0.14	14800 ± 900	12300 ± 680
114Q	Composite Grits (dry mill)	2.62 ± 0.26	11300 ± 960	9510 ± 1200
114R	Composite Meal (dry mill)	1.74 ± 0.06	5320 ± 200	10700 ± 700
114S	Flour (dry mill)	1.40 ± 0.08	2160 ± 170	8410 ± 700
114T	Hull Material (dry mill)	0.80 ± 0.02	2360 ± 130	6430 ± 300
114U	Solvent Extracted Germ (dry mill)	21.5 ± 2.20	82200 ± 13900	32600 ± 2800
114V	Crude Oil (dry mill)	ND	ND	ND
114W	Refined Oil (dry mill)	ND	ND	ND
114X	Steepwater Concentrate (wet mill)	1.38 ± 0.08	ND	1800 ± 170
114Y	Hull Material (wet mill)	0.78 ± 0.04	32.9 ± 6.14	3490 ± 440
114Z	Gluten (wet mill)	0.69 ± 0.05	ND	1160 ± 50
114AA	Starch (wet mill)	ND	ND	66.3 ± 5.1
114AB	Solvent Extracted Germ Press Cake (wet mill)	2.91 ± 0.36	1900 ± 10	8800 ± 700
114AC	Crude Oil (wet mill)	ND	ND	ND
114AD	Refined Oil (wet mill)	ND	ND	ND

TEP (Total Extractable Protein)
ND (Not detectable): Below the limit of quantitation.

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